

Work Order ID 77959

77959

Page 1

December-23-11 10:27:41 AM

Item ID: D206-642-151

Accept

N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Replacement Skidtube

Start Date: 22/12/2011 Start Qty: 1.00

1

Cust Item ID:

Required Date: 01/02/2012 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals:

Process Plan: M.L.J

Date: 11/12/23

Tooling:

Date:

Run Start *NR1*

QC:

Date:

SPC (Y/N):

Date:

Stop *NR2*

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

D3804

A

IIN-D206-642

O

100

0.00

100

DOCUMENT CONTROL

DC

Memo

0.00

Document Control

Photocopy bluefile & type labels per PPP D206-642-151

CHG001

N/A

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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NOTE: Date & initial all entries

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Run Start *NR1*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
110	Skidtubes	0.00							
110									
Skidtubes	Memo	0.00							
Skidtubes	1-Deburr Fwd edge of tube								
	2- Remove ridge on inside of Fwd edge of tube as per Dwg D3804								
	3-Weld Fwd Cap as per Dwg D3804. Use aluminum rod. Grind D2647 to fit as required.								
	Pick:								
	Qty Part Number DescriptionBatch								
	A/R Aluminum Rod M117712/M117785								
	4-Grind weld flush to cap on top surface only.								
	5-Cut Aft end as per dwg D3804 from front of tube and Deburr								
	6-Remove inner indexing ridge on Aft end of skidtube as per Dwg D3804								
	7-Open holes for Aft end cap as per Dwg D3804 with #30 Drill Bit using DT8025.								
	8-Drill pilot holes using Dt8166 & DT8169D & DT9771.								
	9-Locate DT8732 from inner Aft saddle hole & 3rd crossbolt hole. Insert D3286-1 doubler using DT8732 & D206-642-241-T1, then locating doubler off of 3/16" holes, cleco DT8732 & doubler leaving DT8732 for added support.								
	10- Drill D3286-1 doubler rivet holes in tube using # 30 drill, spot drilling doubler at the same time.								

SRM/BB

12-1-25

BE 12-01-25

SRM/BB

12-1-27

SRM/BB

12-1-30

SRM/BB

12-1-27

SAD

12-02-02

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Run Start *NR1*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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11-Working from the center out, drill # 30 holes into D3286-1 doubler. Cleco each hole as it is being drilled. Verify angle of holes to accommodate rivet heads.

12-Remove 3/16" cleco's only and open GHW holes to Ø0.500" as per Dwg D3804

13-Remove D3286-1 doublers, identify orientation, deburr, then attach them to the workorder

14-Remove indexing edge using DT8741 as per Dwg D3804

15-C'sink GHW rivet holes as per Dwg D3804

16- Open Aft cap hole #6.

****no wearplate holes for this skidtube****

17-Deburr tube and blow out chips from inside the tube

120

QC6- Inspect dimensions to drawing

0.00

120

QC

Memo

0.00

Quality Control

SAD 12-02-02
SAD 12-02-02
SAD 12-02-02

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Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
140	Chemical Conversion Coat per QSI005 4.1	0.00							
140									
HandFinish	Memo	0.00							
Hand Finishing									
150	QC3- Inspect Part Finish	0.00							
150									
QC	Memo	0.00							
Quality Control									
160	Skidtubes	0.00							
160									
Skidtubes	Memo	0.00							
Skidtubes	1-Open holes to finished size as per Dwg D3804, (without cutting fluid)								
	2-C'sink crossbolt spacer holes as per Dwg D3804(without cutting fluid)								
	3-Deburr and blow out all chips from inside the tube								

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Start Date: 22/12/2011 Start Qty: 1.00 ***1*** Cust Item ID:
Required Date: 01/02/2012 Req'd Qty: 1.00 ***1*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
170 *170* QC Quality Control	QC6- Inspect dimensions to drawing Memo	0.00 0.00				1	0	BE12-02-02	
180 *180* Skidtubes Skidtubes	Skidtubes Memo 1-Locate, install and rivet doublers as per Dwg D3804. Micro-shave rivets as required 2-Bond D2654-1 web in place as per QSI 015. Ensure holes line up. Allow 12 Hrs. cure time before cutting Start Date: <u>2-02-02</u> Time: <u>6:30</u> Finish Date: <u>2-02-03</u> Time: <u>10:00</u> Pick: Qty Part Number Description Batch A/RSikaflex-291 <u>119999</u> Sikaflex expire date: <u>2012/08/13</u>	0.00 0.00						BE12-02-02 BE12-02-02	

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Revision ID:

Item Name: Replacement Skidtube

Stop ***NS2***

Start Date: 22/12/2011 Start Qty: 1.00

1

Cust Item ID:

Required Date: 01/02/2012 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

190

QC5- Inspect part completeness to step on W/O

0.00

190

QC

Memo

0.00 *S n l a l o z*

Quality Control

W/O:		WORK ORDER CHANGES					
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1

Cust Item ID:

Required Date: 01/02/2012 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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200

0.00

200

Skidtubes

0.00

Skidtubes

Memo

1-remove alodine from around hole and prepare for welding

2-Prep per QSI 005 and Insert D2649 crossbolt spacers. Weld as per QSI 004 and Dwg D3804. Remember to back drill each hole to 0.25" before welding the other side. Use aluminum rod.

Pick:

QtyPart NumberDescriptionBatch

A/RAluminum Rod M119785

3-Grind welds flush as per Dwg D3804.

BB 12/02/06

4-Using DT8733, insert (2) D3286-3 spacers as per QSI 004 and Dwg D3804. Remember to back drill each hole to 0.402" before welding other side. Use SS rod as required.

A/RSS Rod NONEBE 12-02-09

5-Counterbore 5/16" x 0.750" deep except 7th hole from Aft end as per Dwg D3804. Deburr

ND

12-2-10

Dart Aerospace Ltd

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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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 Required Date: 01/02/2012 Req'd Qty: 1.00 ***1*** Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
210	HandFinishing	0.00							
210									
HandFinish	Memo	0.00							
Hand Finishing	Install D2680-041 Nut Plate as per Dwg D3804								
215	QC9- Inspect visual per QSI004- Fusion Welds	0.00							
215									
QC	Memo	0.00							
Quality Control									
220	QC10- Inspect visual per QSI004- ground welds	0.00							
220									
QC	Memo	0.00							
Quality Control									

(1) 12/02/06

12.02.10

5/2/02/11

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
230	QC5- Inspect part completeness to step on W/O	0.00							
230		0.00							
QC	Memo								
Quality Control									
240	Pressure Wash per QSI005 4.3	0.00							
240		0.00							
HandFinish	Memo								
Hand Finishing									
250	White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum	0.00							
250									
Powdercoat	Memo								
Powder Coating									

M11A480

START TIME: 10:20
 OVEN TEMPERATURE: 320
 FINISH TIME: 10:30

10 12/02/13

1X4 m-f 12/02/15

W/O:		WORK ORDER CHANGES					
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1

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1

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
260	QC3- Inspect Part Finish	0.00							
260									
QC	Memo	0.00							
Quality Control									
270	HandFinishing	0.00							
270									
HandFinish	Memo	0.00							
Hand Finishing	1-Install D2651-3 O-Rings on D2651-1 plugs with Petroleum Jelly and install plugs as per Dwg D3804. Clean excess adhesive.								

1 12-2-16

1 12-2-16

W/O:		WORK ORDER CHANGES					
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Stop *NS2*

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Cust Item ID:

Required Date: 01/02/2012 **Req'd Qty:** 1.00 *** 1 ***

Customer:

Reference:

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

Run Start *NR1*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop *NR2*

280

0.00

280

HandFinishing

0.00

HandFinish

Memo

Hand Finishing

1-Install D2646 Aft Cap and seal with Sikaflex. Clean excess adhesive

A/RSikaflex-291

Sikaflex expire date:

2- Install wearplate as per dwg

2-Wing Walk as per Dwg D3804 and QSI 005 4.4

Batch: 119094.

290

QC3- Inspect Part Finish

0.00

290

QC

Memo

0.00

Quality Control

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Stop *NR2*

[illegible]

Dart Aerospace Ltd

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Picklist Print

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Parent Item: D206-642-151

D206-642-151

Parent Item Name: Replacement Skidtube

Start Date: 22/12/2011

Required Date: 01/02/2012

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP REV:A 10.12.08 PER IIN REV:N DD VERF:EC IPP
REV:B 11.09.16 PER IIN REV:O DD VERF:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D2620		Manufactured	No			110	Each	13.0000	1	1			

D2620

Skidtube, 206 Skidtube

**

Location	Loc Qty	Loc Code
LG 77996	13	
71616	3	
71617	6	
75470	2	
75587	2	

① RM/B 12-1-25

D2647

Manufactured No

110

Each

183.0000

1

1

D2647

Cap

**

Location	Loc Qty	Loc Code
LG002	183	
73826	74	
75482	109	

/

BE 12-01-25

W/O:		WORK ORDER CHANGES					
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Parent Item Name: Replacement Skidtube

Start Date: 22/12/2011

Required Date: 01/02/2012

Start Qty: 1.00

Required Qty: 1.00

CR3212-4-04

Purchased

No

180

Each

12,557.00

52

52

CR3212-4-04

Cherry Rivet

**

BE12-02-02

Location

Loc Qty

Loc Code

ST331

2567

116471

78

117816

3

118686

1

118840

16

119017

2459

119075

10

st510

9990

119075

9990

52

D2654-1

Manufactured

No

180

Each

0.0000

1

1

D2654-1

Web

**

BE12-02-02

D3286-1

Manufactured

No

180

Each

178.0000

2

B-77279/B7728

D3286-1

Doubler

**

SAD

12-02-02

Location

Loc Qty

Loc Code

LG002

178

74872

6

75484

54

B76772

(2)

W/O:		WORK ORDER CHANGES					
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Parent Item: D206-642-151

D206-642-151

Parent Item Name: Replacement Skidtube

Start Date: 22/12/2011

Required Date: 01/02/2012

Start Qty: 1.00

Required Qty: 1.00

D2649 Manufactured No 200 Each 634.0000 19 19

D2649

Cross Bolt Spacer

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
LG001	634	
65317	1	
68224	2	
68507	11	
71355	2	
72704	2	
72841	11	
73390	8	
73857	21	
73858	53	
73859	4	
73860	4	
76793	515	

BE 12-02-03
B78020 19

D3286-3 Manufactured No 200 Each 18.0000 2 2

D3286-3

Spacer

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
LG001	1	
74117	1	
LG002	17	
75483	17	

BE 12-02-0
B78015 2

D2680-041 Manufactured No 210 Each 64.0000 1 1

D2680-041

Nut Plate

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
ST020	64	
75479	64	

1 *B 12/02/06*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

December-23-11 10:27:46 AM

Work Order ID: 77959

77959

Parent Item: D206-642-151

D206-642-151

Parent Item Name: Replacement Skidtube

Start Date: 22/12/2011

Required Date: 01/02/2012

Start Qty: 1.00

Required Qty: 1.00

CR3212-4-03

Purchased

No

210

Each

1,762.000

2

2

CR3212-4-03

Cherry Rivet

**

2 12/02/06

Location

Loc Qty

Loc Code

FP002

768

114859

768

ST331

994

110139

2

119017

992

AN960JD416

NAS1149D0463J

Purchased

No

210

Each

0.0000

1

1

AN960JD416

Washer

**

118381 12-2-16

CCR264SS3-3

Purchased

No

210

Each

993.0000

2

CCR264SS3-3

Cherry Rivet

**

2 12/02/06

Location

Loc Qty

Loc Code

ST331

993

113973

2

117849

147

119017

844

MS27039-4-06

Purchased

No

210

Each

323.0000

1

1

MS27039-4-06

Screw

**

12-2-16

Location

Loc Qty

Loc Code

ST292

323

119075 ✓

323

1

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR: Yes No** **DQA:** _____ **Date:** _____
Resolution: _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

December-23-11 10:27:46 AM

Work Order ID: 77959

77959

Parent Item: D206-642-151

D206-642-151

Parent Item Name: Replacement Skidtube

Start Date: 22/12/2011

Required Date: 01/02/2012

Start Qty: 1.00

Required Qty: 1.00

D2651-1 Manufactured No

270 Each 357.0000 6 6

D2651-1
Plug

**

Bl 12-2-16

Location

Loc Qty

Loc Code

FP001

78124.

357

6

57869

1

66445

10

69018

2

70839

2

71037

31

73827

311

D2651-3 Manufactured No

270 Each 847.0000 6 6

D2651-3
O-Ring

**

Bl 12-2-16

Location

Loc Qty

Loc Code

FP001

847

61962

12

73828 ✓

835

D3873-1 Manufactured No

280 Each 611.0000 14 14

D3873-1
Bushing

**

Bl 12-2-16

Location

Loc Qty

Loc Code

ST088

79560.

611

14

64760

1

68247

4

73829

19

73830

2

76792

585

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

December-23-11 10:27:46 AM

Work Order ID: 77959

77959

Parent Item: D206-642-151

D206-642-151

Parent Item Name: Replacement Skidtube

Start Date: 22/12/2011

Required Date: 01/02/2012

Start Qty: 1.00

Required Qty: 1.00

D2646 Manufactured No

280 Each 153.0000 1 1

D2646

Aft Cap

**

Bl 12-2-16

Location

Loc Qty

Loc Code

FP002

153

62678

5

68280

5

70945

1

71038

4

71070

2

73294

1

73825 ✓

135

D3805-041 Manufactured No

280 Each 1.0000 1 1

D3805-041

Wearplate Assembly Fwd, Low Gear

**

Bl 12-2-16

Location

Loc Qty

Loc Code

FP001

1

75149

1

MS27039-1-08 Purchased No

280 Each 1,243.000 2 2

MS27039-1-08

Screw

**

Bl 12-2-16

Location

Loc Qty

Loc Code

ST291

1243

117423

77

118910

226

119075 ✓

440

119109

500

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

December-23-11 10:27:46 AM

Work Order ID: 77959

77959

Parent Item: D206-642-151

D206-642-151

Parent Item Name: Replacement Skidtube

Start Date: 22/12/2011

Required Date: 01/02/2012

Start Qty: 1.00

Required Qty: 1.00

MS21042L3

Purchased

No

280

Each

6,837.000

7

7

MS21042L3

Nut

**

BL 12-2-16

Location

Loc Qty

Loc Code

ST300

6837

117441

16

117885

32

118451

5

118927

3

119017 ✓

5988

7

119075 ✓

793

D3805-045

Manufactured

No

280

Each

2.0000

1

1

D3805-045

Wearplate Assembly Aft, Low Gear

**

BL 12-2-16

Location

Loc Qty

Loc Code

*FP001

78009

2

73817

1

74896

1

AN960JD10L

*NAS1149D0332J ✓ Purchased

No

280

Each

0.0000

2

2

*AN960JD10L *

Washer

**

2 BL 12-2-16

119042

AN3-37A

Purchased

No

280

Each

1,546.000

7

7

AN3-37A

Bolt

**

BL 12-2-16

Location

Loc Qty

Loc Code

ST353

1546

117619

4

119086 ✓

1542

7

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

December-23-11 10:27:46 AM

Work Order ID: 77959

77959

Parent Item: D206-642-151

D206-642-151

Parent Item Name: Replacement Skidtube

Start Date: 22/12/2011

Required Date: 01/02/2012

Start Qty: 1.00

Required Qty: 1.00

NAS1149D0363J

Purchased

No

280

Each

2,252.000

7

7

NAS1149D0363.J

**

Bl 122-16

Washer

Location

Loc Qty

Loc Code

ST298

120/42

2252

117601

61

118077

1

118612

18

118968

137

119537

2035

7.

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

ITEM	Qty -041	Qty -043	Part Number	Description
1	X		D3804-041	SKIDTUBE ASSEMBLY, 206 A/B LOW
2		X	D3804-043	SKIDTUBE ASSEMBLY, 206 A/B HIGH
5	1	1	D2600-1-160	EXTRUSION
6	1	1	D2646	AFT CAP
7	1	1	D2647	CAP
8	19	20	D2649	CROSS BOLT SPACER
9	6	8	D2651-1	PLUG
10	6	8	D2651-3	O-RING
11		1	D2654-3	WEB
12	1		D2654-1	WEB
13	1	1	D2680-041	NUT PLATE
14	2	2	D3286-1	DOUBLER
15	2	2	D3286-3	STUD
21	2	2	AN960JD10L	WASHER
22	1	1	AN960JD416	WASHER
23	2	2	CCR264SS3-3	RIVET
24	2	2	CR3212-4-03	RIVET
25	52	52	CR3212-4-04	RIVET
26	2	2	MS27039-1-08	SCREW
27	1	1	MS27039-4-06	SCREW

NOTES

- 1) MATERIAL: N/A
- 2) FINISH: -CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
-POWDER COAT WHITE (4.3.5.1) PER DART QSI 005 4.3
- 3) BLACK ANTI-SKID PAINT AS INDICATED TO 0.5 ABOVE LOCATION RIDGE PER DART QSI 005 4.4
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 5) UNITS: INCHES UNLESS OTHERWISE NOTED
- 6) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 7) IDENTIFICATION: NONE
- 8) WEIGHT: 12.5 lb
- 9) WELD PER DART QSI 004
- 10) BENDING: DAMAGE TOLERANCE ON FWD BEND:
THERE SHOULD BE NO VISIBLE WRINKLES IN THE BEND FROM THE GROUND TO A HEIGHT OF 5 INCHES ABOVE THE GROUND. IT IS ACCEPTABLE TO POLISH OUT GOUGES UP TO 0.020 DEEP IN THE BENT PORTION OF THE TUBE. A MAXIMUM REDUCTION IN DIAMETER OF 0.150" IS ACCEPTABLE IN THE BENT PORTION OF THE TUBE.
- 11) BOND WEB INTO OUTER TUBE WITH SIKAFLEX-241/-291 ADHESIVE PER DART QSI 015
- 12) INSERT D2651-1 PLUG C/W D2651-3 O-RING IN HOLES MARKED 'P' (BOTH SIDES OF TUBE)

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 77959 M.L.J.
11/12/23

RELEASED
UP 09.03.03
per ECN 09-530

A	NEW ISSUE	MB	08.07.07
REV.	DESCRIPTION	BY	DATE
DESIGN	<u>97</u>	DART AEROSPACE USA, INC	
DRAWN	<u>1</u>	PORT HADLOCK, WA	
CHECKED	<u>1</u>	DRAWING NO.	REV. A
MFG. APPR.	<u>1</u>	D3804	SHEET 1 OF 5
APPROVED	<u>1</u>	TITLE	SCALE
DE APPR.	<u>1</u>	SKIDTUBE ASSEMBLY, 206A/B	NTS
DATE	08.07.07	COPYRIGHT © 2008 BY DART AEROSPACE USA, INC THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
 Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

RELEASED
09-03-03



DESIGN	<i>q</i>	DART AEROSPACE USA, INC PORT HADLOCK, WA DRAWING NO. D3804 TITLE SKIDTUBE ASSEMBLY, 206A/B COPYRIGHT © 2009 BY DART AEROSPACE USA, INC <small>THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT THE WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.</small>	REV. A
DRAWN	<i>h</i>		SHEET 2 OF 5
CHECKED	<i>q</i>		
MFG. APPR.	<i>h</i>		
APPROVED	<i>h</i>		
DE APPR.	<i>h</i>		NTS
DATE 08.07.07			

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

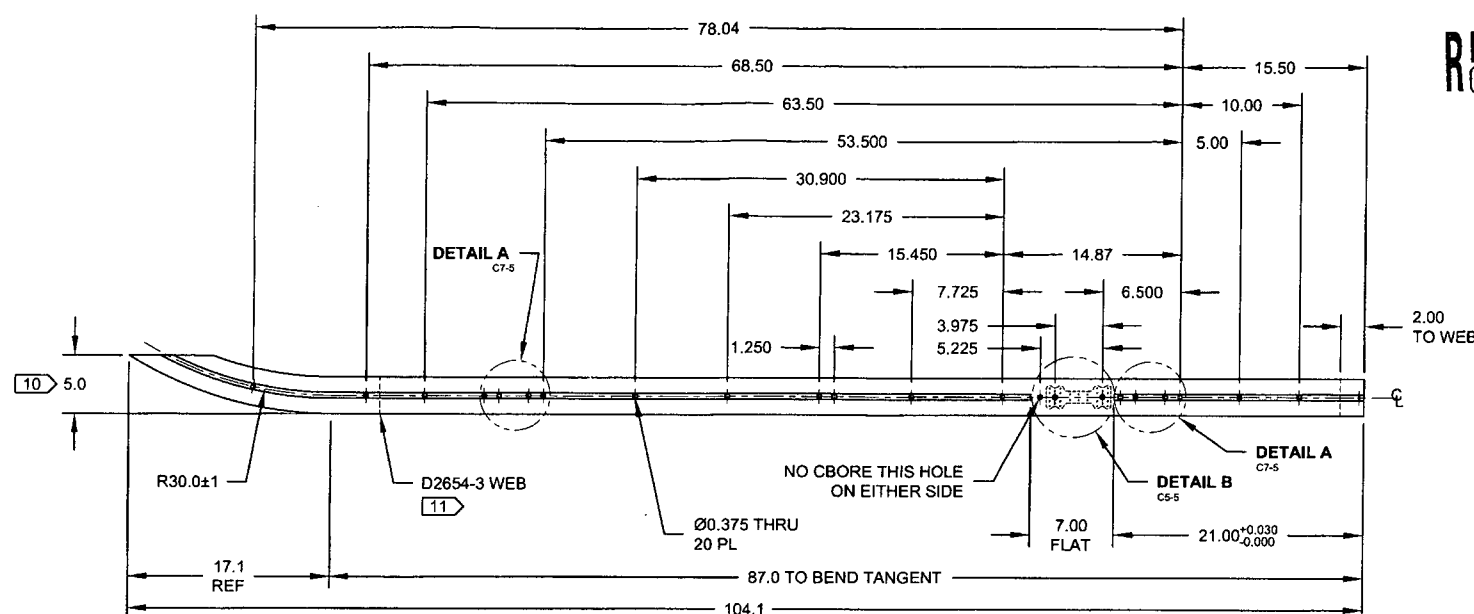
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

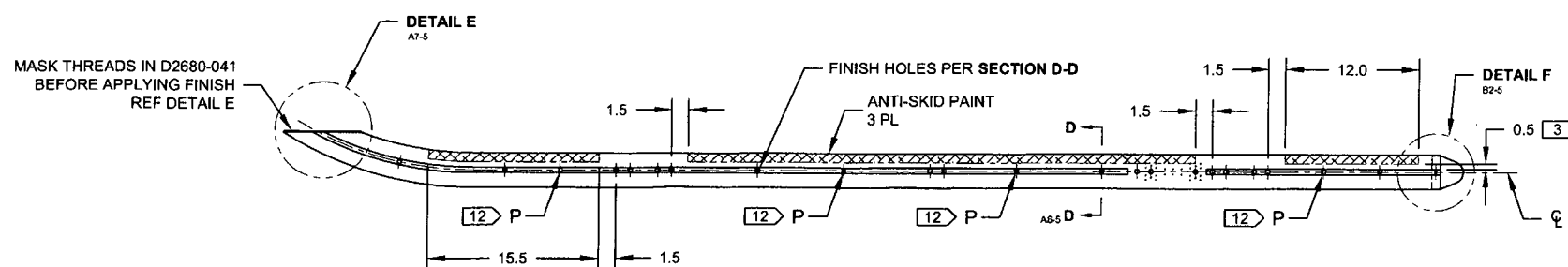
NOTE: Date & initial all entries

77959

RELEASED
09-03-03



D3804-043 BENDING/DRILLING DETAIL



D3804-043 ASSEMBLY/FINISHING DETAIL

DESIGN	99	DART AEROSPACE USA, INC	
DRAWN	99	PORT HADLOCK, WA	
CHECKED	99	DRAWING NO.	REV. A
MFG. APPR.	EE	D3804	SHEET 3 OF 5
APPROVED	99	TITLE	SCALE
DE APPR.	99	SKIDTUBE ASSEMBLY, 206A/B	NTS
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Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

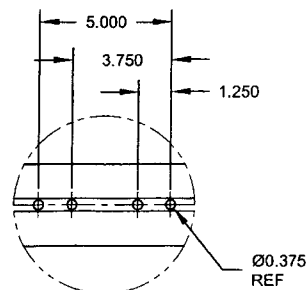
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

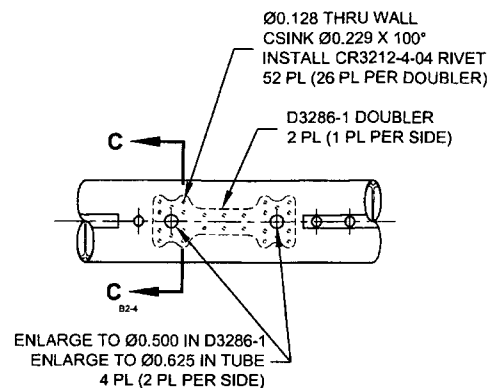
NOTE: Date & initial all entries

77959

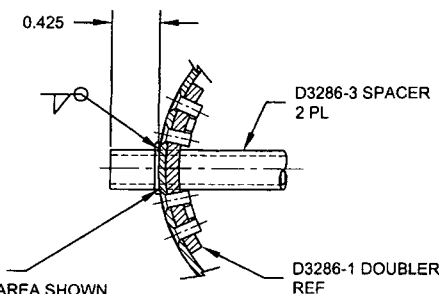
RELEASED
UP 09.03.03



DETAIL A
D6-2
C2-2
D6-3
C2-3
SCALE NONE

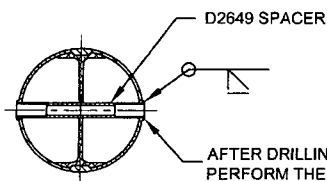


DETAIL B
C3-2
C3-3
SCALE NONE



- TO INSTALL D3286-1/3:
1. GRIND OFF FLANGE IN AREA SHOWN, FLUSH WITH OUTSIDE SURFACE OF ROUND TUBE
 2. LOCATE & DRILL D3286-1 DOUBLER USING DT3286-1T1
 3. ENLARGE HOLES IN D3286-1 TO Ø0.500
 4. ENLARGE HOLES IN TUBE TO Ø0.625 AND CHAMFER HOLE 0.03 X 45°
 5. RIVET D3286-1 TO TUBE
 6. INSERT D3286-3 SPACER
 7. WELD IN PLACE AND GRIND FLUSH

SECTION C-C
C6-4
PARTIAL SECTION
SCALE NONE



- AFTER DRILLING AND BENDING ASSEMBLY PERFORM THE FOLLOWING FOR Ø0.375 HOLES ONLY:
1. CHAMFER HOLE 0.03 X 45°
 2. INSERT D2649 SPACER
 3. WELD INTO PLACE AND GRIND FLUSH
 4. CBORE TO Ø0.313 X 0.75 DP (EXCEPT WHERE INDICATED)

SECTION D-D
A4-2
A4-3
FOR Ø0.375 HOLES ONLY
SCALE NONE

DESIGN	91	DART AEROSPACE USA, INC	
DRAWN	1	PORT HADLOCK, WA	
CHECKED	91	DRAWING NO.	REV.
MFG. APPR.	EE	D3804	SHEET 4 OF 5
APPROVED	91	TITLE	SCALE
DE APPR.	91	SKIDTUBE ASSEMBLY, 206A/B	NTS
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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

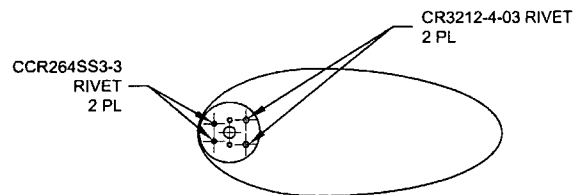
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

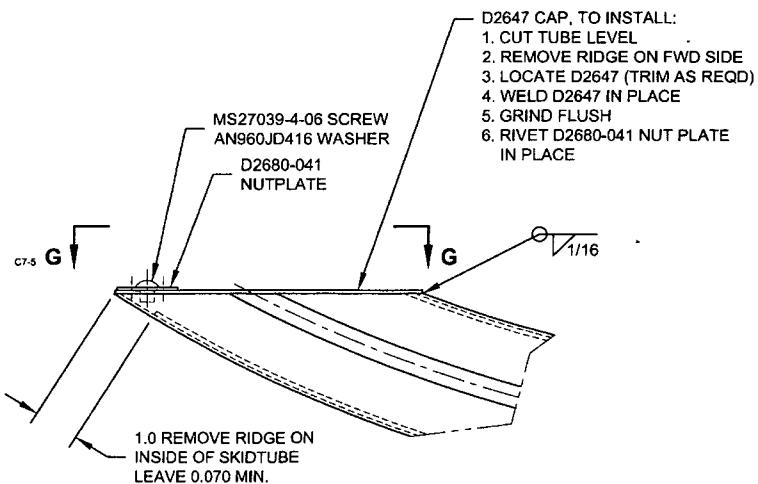
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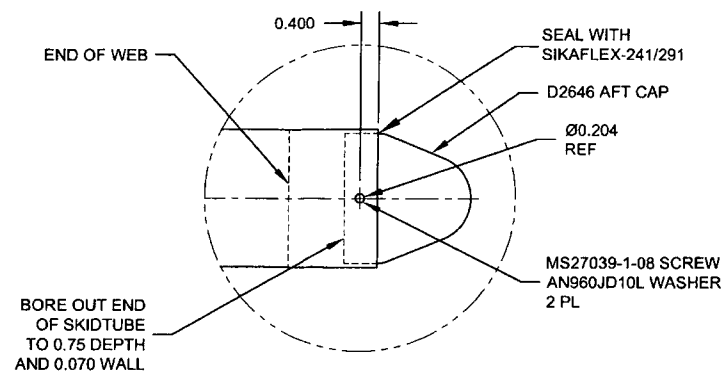
RELEASED
69-03-03



VIEW G-G
SCALE NONE A7-5



DETAIL E
SCALE NONE 87-2 87-3



DETAIL F
SCALE NONE 82-2 82-3

DESIGN	91	DART AEROSPACE USA, INC	
DRAWN	J	PORT HADLOCK, WA	
CHECKED	91	DRAWING NO.	REV. A
MFG. APPR.	EE	D3804	SHEET 5 OF 5
APPROVED	91	TITLE	SCALE
DE APPR.	91	SKIDTUBE ASSEMBLY, 206A/B	NTS
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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

NO. 28

AWS D17.1.2001
QUALIFICATION TEST RECORD

Name: Barclay Elmer
Job number: 77982
Part number: 2810-2-2-15
Description: SEAL
Welding Process: Tig[] Mig[]
Base material: Aluminum
Current: AC[] DC[]

TEST REQUIREMENTS AND RESULTS

Visual: pass[☒] fail[]
Penetration: pass[☒] fail[]

UNACCEPTABLE

Cracks: pass[☒] fail[]
Undercut: pass[☒] fail[]
Pin holes: pass[☒] fail[]
Overlap (cold lap): pass[☒] fail[]
Porosity (surface): pass[☒] fail[]
Coloration: pass[☒] fail[]

Qualifier Barclay Elmer Date of Test Coupon 12-2-2006

Welder Barclay Elmer Date of Test Coupon 12-2-2006

The above named individual is qualified in accordance with AWS D17.1.2001 to weld